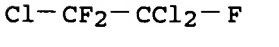
```
     (FILE 'HOME' ENTERED AT 12:58:40 ON 18 AUG 2004)

     FILE 'REGISTRY' ENTERED AT 12:59:00 ON 18 AUG 2004
L1             1 S 1,1,1-TRIFLUORO-2,2,2-TRICHLOROETHANE/CN
L2             1 S 1,1,1-TRIFLUORO-2,2-DICHLOROETHANE/CN
L3             1 S 1,1,2-TRIFLUORO-1,2,2-TRICHLOROETHANE/CN
L4             0 S 1,1,2-TRIFLUORO-2,2-DICHLOROETHANE/CN
L5             0 S 1,2,2-TRIFLUORO-1,1-DICHLOROETHANE/CN
L6               STRUCTURE UPLOADED
L7             1 S L6
L8             4 S L6 FUL
L9             1 S 812-04-4/RN

     FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 13:08:00 ON 18 AUG 2004
L10         1431 S L1
L11         3575 S L2
L12        10592 S L3

     FILE 'REGISTRY' ENTERED AT 13:09:23 ON 18 AUG 2004
L13            0 S 1,1,2-TRIFLUORO-1,2-DIFLUOROETHANE/CN
L14            1 S 1,2-DICHLORO-1,1,2-TRIFLUOROETHANE/CN

     FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 13:11:03 ON 18 AUG 2004
L15          661 S L14
L16          151 S L9
L17          450 S L10 AND L12
L18            8 S L17 AND ANTIMO?
L19            6 DUP REM L18 (2 DUPLICATES REMOVED)
L20           75 S L10 AND L15
L21            0 S L20 AND ANTIMO?
L22           75 S L20 NOT L18
L23            4 S L20 AND ?PENTAFLUORIDE
L24            2 DUP REM L23 (2 DUPLICATES REMOVED)
L25           14 S L10 AND L16
L26           14 S L25 NOT L18
L27            9 DUP REM L26 (5 DUPLICATES REMOVED)
L28            9 S L27 NOT L24
L29            0 S L28 AND ANTIMO?
L30          373 S L11 AND L15
L31            6 S L30 AND ANTIMO?
L32            6 S L31 NOT L18
L33            3 DUP REM L32 (3 DUPLICATES REMOVED)
L34          510 S L11 AND L12
L35           10 S L34 AND ANTIMO?
L36            8 S L35 NOT L18
L37            6 S L36 NOT L32
L38            3 DUP REM L37 (3 DUPLICATES REMOVED)
L39          105 S L11 AND L16
L40            2 S L39 AND ANTIMO?
L41            1 DUP REM L40 (1 DUPLICATE REMOVED)
```

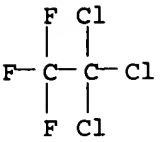
L19 ANSWER 1 OF 6 USPATFULL on STN
AN 2000:132057 USPATFULL
TI Catalysts for halogenated hydrocarbon processing, their precursors and their preparation and use
IN Duzick, Timothy C., Hockessin, DE, United States
Rao, Velliyur Nott Mallikarjuna, Wilmington, DE, United States
Subramanian, Munirpallam A., Kennett Square, PA, United States
PA E. I. du Pont de Nemours and Company, Wilmington, DE, United States (U.S. corporation)
PI US 6127585 20001003
WO 9719751 19970605
AI US 1998-77267 19980527 (9)
WO 1996-US18967 19961126
19980527 PCT 371 date
19980527 PCT 102(e) date
PRAI US 1995-7734P 19951129 (60)
DT Utility
FS Granted
EXNAM Primary Examiner: Wu, David W.; Assistant Examiner: Zalukaeva, Tanya
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 958
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Processes are disclosed for decreasing the chlorine to carbon ratio for halogenated hydrocarbons containing chlorine and from 1 to 6 carbon atoms, in the presence of a multiphase catalyst. The processes each involve (1) preparing a single phase solid catalyst precursor which has a structure that collapses at a temperature of about 400° C. or less and has the formula (NH.sub.3).sub.6 Ru.sub.1-r-s Co.sub.r Cr.sub.s MF.sub.6, where r+s is in the range of 0.00 to 0.99, and M is at least one trivalent metal selected from the group consisting of Al, Cr, Fe, V, Sc and Ga; and (2) producing the multiphase catalyst by heating the single phase solid catalyst precursor to about 400° C. or less in an non-oxidizing atomsphere to produce a multiphase composition wherein a phase containing ruthenium is homogeneously dispersed with a phase containing metal fluoride.

Also disclosed are single phase fluoride compositions having the formula (NH.sub.3).sub.6 Ru.sub.1-r-s Co.sub.r Cr.sub.s MF.sub.6, where r+s is in the range of 0.00 to 0.99, and M is at least one trivalent element selected from the group consisting of Al, Cr, Fe, V, Sc and Ga; and multiphase catalyst compositions consisting essentially of metallic ruthenium and fluorides of at least one element selected from the group consisting of Al, Co, Cr, Fe, V, Sc and Ga, wherein the ruthenium is homogeneously dispersed with phases of the fluorides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **76-13-1**, 1,1,2-Trichloro-1,2,2-trifluoroethane **354-58-5**
, 1,1,1-Trichloro-2,2,2-trifluoroethane
(catalysts for dechlorination and hydrogenolysis or hydrofluorination of halogenated hydrocarbon)
RN 76-13-1 USPATFULL
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)



RN 354-58-5 USPATFULL
CN Ethane, 1,1,1-trichloro-2,2,2-trifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

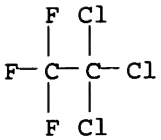


L19 ANSWER 2 OF 6 USPATFULL on STN
AN 96:73014 USPATFULL
TI Process for manufacture of high purity 1, 1-dichlorotetrafluoroethane
IN Rao, V. N. Mallikarjuna, Wilmington, DE, United States
PA E.I. Du Pont de Nemours and Company, Wilmington, DE, United States (U.S. corporation)
PI US 5545770 19960813
AI US 1995-437195 19950508 (8)
RLI Continuation of Ser. No. US 1993-146335, filed on 1 Nov 1993, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Siegel, Alan
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 652
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process is disclosed for producing a product comprising CCl.sub.2 FCF.sub.3 substantially free of CClF.sub.2 CClF.sub.2. The process includes (i) contacting a mixture of perhalogenated hydrocarbons which is essentially free of CClF.sub.2 CClF.sub.2 and comprises from 20 to 80 mole percent CCl.sub.3 CF.sub.3 and from 5 to 80 mole percent total of at least one compound selected from the group consisting of CCl.sub.2 .dbd.CCl.sub.2, CCl.sub.3 CCl.sub.2 F, CCl.sub.2 FCCl.sub.2 F and CClF.sub.2 CCl.sub.3 with HF and optionally Cl.sub.2 (provided that when the mixture comprises CCl.sub.2 .dbd.CCl.sub.2, Cl.sub.2 is supplied in a mole ratio of Cl.sub.2 to CCl.sub.2 .dbd.CCl.sub.2 of at least 1:2) over a fluorination catalyst at an elevated temperature no higher than 375° C., to provide a product mixture comprising CCl.sub.2 FCClF.sub.2 and C.sub.2 Cl.sub.2 F.sub.4 wherein the ratio of CClF.sub.2 CClF.sub.2 to CCl.sub.2 FCF.sub.3 is less than about 1:50; (ii) recovering said C.sub.2 Cl.sub.2 F.sub.4 from the product mixture; (iii) isomerizing CCl.sub.2 FCClF.sub.2 from the product mixture to CCl.sub.3 CF.sub.3 in the presence of an isomerization catalyst; and (iv) recycling the CCl.sub.3 CF.sub.3 produced by the isomerization of step (iii) to step (i). The process may be used to produce high purity CH.sub.2 FCF.sub.3 when combined with the hydrodehalogenation of the high purity CCl.sub.2 FCF.sub.3 from step (ii) in the presence of HF.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **76-13-1P**, 1,1,2-Trichloro-1,2,2-trifluoroethane
(process for manufacture of high purity 1,1-dichlorotetrafluoroethane)
RN 76-13-1 USPATFULL
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)

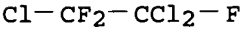
$Cl-CF_2-CCl_2-F$

IT **354-58-5**, 1,1,1-Trichloro-2,2,2-trifluoroethane
(process for manufacture of high purity 1,1-dichlorotetrafluoroethane)
RN 354-58-5 USPATFULL
CN Ethane, 1,1,1-trichloro-2,2,2-trifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

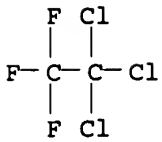


L19 ANSWER 3 OF 6 USPATFULL on STN
AN 95:78355 USPATFULL
TI Process for manufacture of high purity 1,1-dichlorotetrafluoroethane
IN Rao, V. N. Mallikarjuna, Wilmington, DE, United States
PA E. I. du Pont de Nemours and Company, Wilmington, DE, United States (U.S. corporation)
PI US 5446216 19950829
AI US 1993-146335 19931101 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Siegel, Alan
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 603
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process is disclosed for producing a product comprising CCl.sub.2 FCF.sub.3 substantially free of CClF.sub.2 CClF.sub.2. The process includes (i) contacting a mixture of perhalogenated hydrocarbons which is essentially free of CClF.sub.2 CClF.sub.2 and comprises from 20 to 80 mole percent CCl.sub.3 CF.sub.3 and from 5 to 80 mole percent total of at least one compound selected from the group consisting of CCl.sub.2 .dbd.CCl.sub.2, CCl.sub.3 CCl.sub.2 F, CCl.sub.2 FCCl.sub.2 F and CClF.sub.2 CCl.sub.3 with HF and optionally Cl.sub.2 (provided that when the mixture comprises CCl.sub.2 .dbd.CCl.sub.2, Cl.sub.2 is supplied in a mole ratio of Cl.sub.2 to CCl.sub.2 .dbd.CCl.sub.2 of at least 1:2) over a fluorination catalyst at an elevated temperature no higher than 375° C. to provide a product mixture comprising CCl.sub.2 FCClF.sub.2 and C.sub.2 Cl.sub.2 F.sub.4 wherein the ratio of CClF.sub.2 CClF.sub.2 to CCl.sub.2 FCF.sub.3 is less than about 1:50; (ii) recovering said C.sub.2 Cl.sub.2 F.sub.4 from the product mixture; (iii) isomerizing CCl.sub.2 FCClF.sub.2 from the product mixture to CCl.sub.3 CF.sub.3 in the presence of an isomerization catalyst; and (iv) recycling the CCl.sub.3 CF.sub.3 produced by the isomerization of step (iii) to step (i). The process may be used to produce high purity CH.sub.2 FCF.sub.3 when combined with the hydrodehalogenation of the high purity CCl.sub.2 FCF.sub.3 from step (ii) in the presence of HF.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **76-13-1P**, 1,1,2-Trichloro-1,2,2-trifluoroethane
(process for manufacture of high purity 1,1-dichlorotetrafluoroethane)
RN 76-13-1 USPATFULL
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)

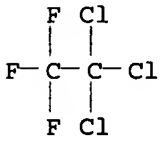


IT **354-58-5**, 1,1,1-Trichloro-2,2,2-trifluoroethane
(process for manufacture of high purity 1,1-dichlorotetrafluoroethane)
RN 354-58-5 USPATFULL
CN Ethane, 1,1,1-trichloro-2,2,2-trifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

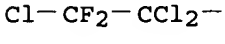


L19 ANSWER 4 OF 6 USPATFULL on STN
AN 93:22899 USPATFULL
TI Catalyzed hydrofluorination halogenated alkanes
IN Rao, V. N. Mallikarjuna, Wilmington, DE, United States
PA E. I. Du Pont de Nemours and Company, Wilmington, DE, United States (U.S. corporation)
PI US 5196615 19930323
AI US 1990-570952 19900822 (7)
RLI Continuation of Ser. No. US 1989-365655, filed on 16 Jun 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-210556, filed on 23 Jun 1988, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Siegel, Alan
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 279
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Process for the preparation of fluorinated alkanes by contacting halogenated alkanes with HF in the presence of TaCl.sub.5 or TaBr.sub.5.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **354-58-5**
(hydrofluorination of, catalysts for)
RN 354-58-5 USPATFULL
CN Ethane, 1,1,1-trichloro-2,2,2-trifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **76-13-1P**
(preparation of)
RN 76-13-1 USPATFULL
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)



L19 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 1991:428682 CAPLUS
DN 115:28682
TI Process for manufacture of 1,1-dichlorotetrafluoroethane
IN Gumprecht, William Henry; Longoria, John Mark; Christoph, Frank J.
PA du Pont de Nemours, E. I., and Co., USA
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA English

FAN.CNT 1

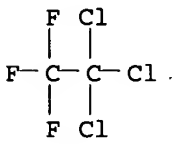
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 426343	A1	19910508	EP 1990-311508	19901019
	EP 426343	B1	19940223		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 101846	E	19940315	AT 1990-311508	19901019
	ES 2062402	T3	19941216	ES 1990-311508	19901019
	CA 2028486	AA	19910501	CA 1990-2028486	19901024
	BR 9005385	A	19910917	BR 1990-5385	19901024
	RU 2010789	C1	19940415	RU 1990-4831546	19901029
	AU 9065611	A1	19910502	AU 1990-65611	19901030
	AU 641190	B2	19930916		
	CN 1051351	A	19910515	CN 1990-108727	19901030
	CN 1026690	B	19941123		
	JP 03218329	A2	19910925	JP 1990-290974	19901030
	JP 2930697	B2	19990803		
	CS 276566	B6	19920617	CS 1990-5322	19901030
	ZA 9008686	A	19920624	ZA 1990-8686	19901030
PRAI	US 1989-429126		19891030		
	EP 1990-311508		19901019		

AB CF3CCl2F (I) was obtained substantially free of CClF2CClF2, CF3CClF2, and CF3CF3 by contacting a trichlorotrifluoroethane liquid, e.g., a mixture of CCl3CF3 (II) and CClF2CCl2F (III), with HF and a SbCl5-xFx (x = 0-3) catalyst and separating gaseous I. Thus, a mixture containing II, 0.71% III, and 1.75% I was fed, along with a sep. feed of HF and Cl2, to a pressure reactor containing SbCl5 at 110°/250 psig, and the effluent gas was collected as a mixture containing 99.5% I, 0.10% CClF2CClF2, 0.30% II, and 0.10% III. The yield of I was 98.2%.

IT **76-13-1**, 1,1,2-Trichlorotrifluoroethane **354-58-5**, 1,1,1-Trichloro-2,2,2-trifluoroethane
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorination of)

RN 76-13-1 CAPLUS
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)

RN 354-58-5 CAPLUS
CN Ethane, 1,1,1-trichloro-2,2,2-trifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



L19 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1978:528721 CAPLUS
DN 89:128721
TI Reaction of 1,1,2-trichloro-1,2,2-trifluoroethane and other fluorohalocarbons with aluminum halides in the presence and absence of additives. Distinction in carbonium ion character and reaction conditions between substitution and isomerization
AU Okuhara, Kunio
CS Gov. Ind. Res. Inst., Nagoya, Japan
SO Journal of Organic Chemistry (1978), 43(14), 2745-9

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

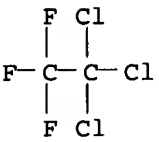
AB In the reaction of CF2ClCFCl2 with AlCl3, the addition of CS2, Cl2C:CHCl, CH2Cl2, n-hexane, cyclohexane, etc., effectively inhibited the isomerization into CF3CCl3 without significantly retarding substitution, which gives CF2ClCCl3. Cyclohexane was also used similarly to obtain CF3CClBr2 from CF3CFBr2, CF2BrCCl2Br from CF2BrCFClBr, CF2BrCClBr2 from CF2BrCFClBr (with AlBr3), and CF2ClCBrCl2 from CF2ClCFCl2 (with AlBr3). In each of these reactions cyclohexane-methylcyclopentane equilibration as well as formation of a small amount of a hydride-transfer product, such as CF2ClCHCl2, was noted. In the treatment of CF2ClCFCl2 with AlCl3, the isomerization was inhibited by vigorous stirring, discontinuation of which afforded aluminum fluoride ppts. which catalyze the isomerization of fluorohalocarbons. Reactions of CF2ClCFCl2 with Al halides in the presence of halomethanes and similar reactions of CF2BrCFClBr were also studied. The substitution reaction is considered to proceed in solution via the ion pair CF2ClC+Cl2 AlFL-3 without rearrangement, while the isomerization is considered predominantly a surface reaction.

IT **354-58-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 354-58-5 CAPLUS

CN Ethane, 1,1,1-trichloro-2,2,2-trifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

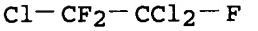


IT **76-13-1**

RL: RCT (Reactant); RACT (Reactant or reagent)
(substitution reaction of, with aluminum chloride, isomerization inhibition in, by additives)

RN 76-13-1 CAPLUS

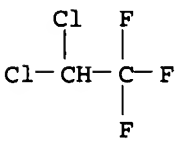
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)



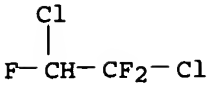
L33 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2003:202600 CAPLUS
DN 138:223284
TI Isomerization process and catalysts for the manufacture of CF3 group-substituted alkanes
IN Braun, Max; Brosch, Carsten
PA Solvay Fluor und Derivate G.m.b.H., Germany
SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003020675	A1	20030313	WO 2002-EP9547	20020827
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10143177	A1	20030320	DE 2001-10143177	20010904
EP 1427687	A1	20040616	EP 2002-797548	20020827
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
PRAI DE 2001-10143177	A	20010904		
WO 2002-EP9547	W	20020827		

OS MARPAT 138:223284
AB Highly fluorinated **antimony** SbCl0-0.5F4.5-5 (e.g., SbF5), especially as a hydrogen fluoride addition compound, can be used as an isomerization catalyst for the isomerization of halogen(hydro)alkanes CF2Cl2CF2Y (Y = H, Cl, F, C1-3 alkyl, halo-substituted C1-3 alkyl; e.g., 1,1,2-trifluoro-1,2-dichloroethane) or CF2ClCFXY (X = H, Cl, F) into CF3 group-substituted alkanes CF3CClXY (e.g., 1,1,1-trifluoro-2,2-dichloroethane). The method is also suitable for the purification of certain (hydro)carbon compds. which are contaminated by isomerizable compds.
IT **306-83-2P**, 1,1,1-Trifluoro-2,2-dichloroethane
RL: IMF (Industrial manufacture); PREP (Preparation)
(isomerization process and catalysts for the manufacture of CF3 group-substituted alkanes)
RN 306-83-2 CAPLUS
CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **354-23-4**, 1,1,2-Trifluoro-1,2-dichloroethane
RL: RCT (Reactant); RACT (Reactant or reagent)
(isomerization process and catalysts for the manufacture of CF3 group-substituted alkanes)
RN 354-23-4 CAPLUS
CN Ethane, 1,2-dichloro-1,1,2-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

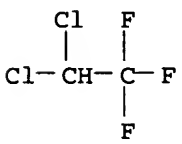


RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

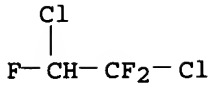
L33 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1991:206550 CAPLUS
DN 114:206550
TI Preparation of fluorinated derivatives of pentachloroethane by a halogen-exchange process
IN Gumprecht, William Henry; Rimmer, Robert W.
PA du Pont de Nemours, E. I., and Co., USA
SO Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 414370	A1	19910227	EP 1990-307740	19900716
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2021464	AA	19910125	CA 1990-2021464	19900718
	BR 9003560	A	19910827	BR 1990-3560	19900723
	AU 9059721	A1	19910124	AU 1990-59721	19900724
	AU 626164	B2	19920723		
	CN 1049150	A	19910213	CN 1990-104819	19900724
	JP 03169829	A2	19910723	JP 1990-196032	19900724
	ZA 9005808	A	19920325	ZA 1990-5808	19900724
PRAI	US 1989-383632		19890724		
	US 1989-432368		19891025		

OS CASREACT 114:206550; MARPAT 114:206550
AB Preparation of CF3CHCl2, CF3CHClF, and CF3CHF2 in high yields substantially uncontaminated by perhalogenated byproducts by treating less fluorinated precursors with SbF5 or SbF4Cl is described. Thus, treating 101.6 g CClF2CHCl2 with 189.9 g SbF5 gave 91.98% CF3CHCl2 (I) and 7.42% CF3CHClF (II). Treating 23.1 lbs I with 25.7 lbs SbF5 gave 92% II (based on SbF5). Treating II with excess SbF5 at 170° gave CF3CHF2.
IT **306-83-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and fluorination of, with **antimony** pentafluoride)
RN 306-83-2 CAPLUS
CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **354-23-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, by fluorination of chlorofluoroethanes)
RN 354-23-4 CAPLUS
CN Ethane, 1,2-dichloro-1,1,2-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



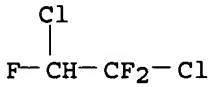
L33 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
AN 1990:216214 CAPLUS
DN 112:216214
TI Process for producing 1,1-dichloro-2,2,2-trifluoroethane
IN Yoneda, Hajime; Takei, Ruytaro
PA Asahi Glass Co., Ltd., Japan
SO PCT Int. Appl., 11 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9001474	A1	19900222	WO 1989-JP803	19890804
	W: US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	JP 02045430	A2	19900215	JP 1988-194596	19880805
	JP 07091202	B4	19951004		
	EP 424531	A1	19910502	EP 1989-909047	19890804
	R: DE, FR, GB, IT, NL				
PRAI	JP 1988-194596		19880805		
	WO 1989-JP803		19890804		

AB CF3CHCl2 (I) is prepared by fluorination of Cl2CHCClF2 (II) or FCCl2cHCl2 with HF in the presence of SbCl5 to minimize the byproduct ClCF2CHClF (III). Heating a mixture of II, HF, and SbCl5 at 130° gave 57% unreacted II and 38% I and III with I/III > 99.

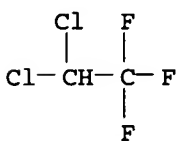
IT **354-23-4P**, R123a
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in manufacture of R123)

RN 354-23-4 CAPLUS
CN Ethane, 1,2-dichloro-1,1,2-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

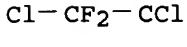


IT **306-83-2P**, R123
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of)

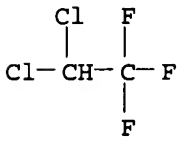
RN 306-83-2 CAPLUS
CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L38 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2000:630740 CAPLUS
DN 133:339232
TI Recommendation of Occupational Exposure Limits
AU Sakurai, Haruhiko
CS Japan
SO Journal of Occupational Health (2000), 42(4), 213-228
CODEN: JOCHFV; ISSN: 1341-9145
PB Japan Society for Occupational Health
DT Journal
LA English
AB The Japan Society for Occupational Health (JSOH) recommends Occupational Exposure Limits (OEL) as reference values for preventing adverse health effects on workers caused by occupational exposure to chemical substances, continuous or intermittent noise, impulsive or impact noise, heat stress, cold stress, whole-body vibration, hand-arm vibration and time-varying elec., magnetic, and electromagnetic fields.
IT **76-13-1**, 1,1,2-Trichloro-1,2,2-trifluoroethane **306-83-2**, 2,2-Dichloro-1,1,1-trifluoroethane
RL: ADV (Adverse effect, including toxicity); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence)
(recommendations for occupational exposure limits of Japan Society for Occupational Health)
RN 76-13-1 CAPLUS
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)



RN 306-83-2 CAPLUS
CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



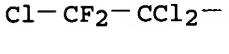
L38 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
AN 1995:798769 CAPLUS
DN 123:313352
TI A study on the fluorination of pentachloroethane
AU Park, Kun-You; Kwon, Young-Soo; Kim, Hoon-Sik; Lee, Sang-Deuk; Lee, Byung-Gwon
CS CFC Alternatives Technology Center, Korea Institute Science and Technology, S. Korea
SO Kongop Hwahak (1993), 4(2), 318-23
CODEN: KOHWE9; ISSN: 1225-0112
PB Korean Society of Industrial and Engineering Chemistry
DT Journal
LA Korean
AB Pentachloroethane (CHCl2CCl3) was synthesized and reacted with hydrogen fluoride using **antimony** pentahalide catalyst (SbClxFy) in order to manufacture HCFC-123 (CF3CHCl2), a potential CFC-11(CFCl3) substitute candidate. Products analyses showed the fluorination proceeds through fluorine-chlorine exchanges between HF/SbClxFy and SbClxFy/CCl3CHCl2 resp. The degree of fluorination of CCl3 group in pentachloroethane was greatly affected on the reaction temperature, but the effect of catalyst concentration was

relatively small. Mechanistic study was also performed to elucidate the pathway to the formation of side-products such as CCl3CFCl2, CFCl2CFCl2 and CF2ClCFCl2.

IT **76-13-1P**, Ethane, 1,1,2-trichloro-1,2,2-trifluoro-
RL: BYP (Byproduct); PREP (Preparation)
(fluorination of pentachloroethane)

RN 76-13-1 CAPLUS

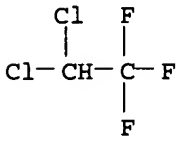
CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)



IT **306-83-2P**, HCFC-123
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorination of pentachloroethane)

RN 306-83-2 CAPLUS

CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L38 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3

AN 1993:147179 CAPLUS

DN 118:147179

TI Process for preparing 1,1,1-trifluoro-2,2-dichloroethane

IN Park, Kun Y.; Kim, Hoon S.

PA Korea Institute of Science and Technology, S. Korea

SO U.S., 3 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5091602	A	19920225	US 1991-647568	19910128
	JP 04257532	A2	19920911	JP 1991-89375	19910329
	JP 07053675	B4	19950607		
PRAI	KR 1990-16639		19901018		

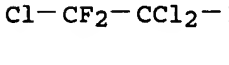
OS CASREACT 118:147179; MARPAT 118:147179

AB CF3CHCl2 was prepared by treating C2HCl5 with HF in the presence of a catalyst comprising SbX5 (X = halo) and MX2L2 or MX2(L-L) [M = Ni, Pd, Pt; X = Cl, Br; L = Ph3P or trialkylphosphine; L-L = bis(diphenylphosphino)ethane, 1,2-diaminoethane, or S2CH2]. Thus, SbCl5 10, NiCl2(PEt3)2 1.5, C2HCl5 100, an HF 50 g were successively introduced into a high-pressure reactor. The mixture was heated at 130° with stirring, addnl. HF added when the pressure reached 20 atm, and the pressure of the reactor maintained at 20 atm for 1 h to give a product comprising 33% CF3CHCl2 14% ClCF2CHCl2, and 3% ClCF2CFCl2.

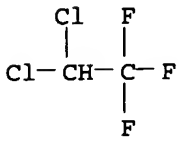
IT **76-13-1P 306-83-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 76-13-1 CAPLUS

CN Ethane, 1,1,2-trichloro-1,2,2-trifluoro- (8CI, 9CI) (CA INDEX NAME)



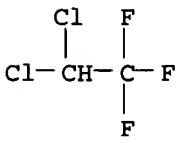
RN 306-83-2 CAPLUS
CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L41 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
AN 2003:202600 CAPLUS
DN 138:223284
TI Isomerization process and catalysts for the manufacture of CF3 group-substituted alkanes
IN Braun, Max; Brosch, Carsten
PA Solvay Fluor und Derivate G.m.b.H., Germany
SO PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003020675	A1	20030313	WO 2002-EP9547	20020827
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10143177	A1	20030320	DE 2001-10143177	20010904
EP 1427687	A1	20040616	EP 2002-797548	20020827
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
PRAI DE 2001-10143177	A	20010904		
WO 2002-EP9547	W	20020827		

OS MARPAT 138:223284
AB Highly fluorinated **antimony** SbCl0-0.5F4.5-5 (e.g., SbF5), especially as a hydrogen fluoride addition compound, can be used as an isomerization catalyst for the isomerization of halogen(hydro)alkanes CF2Cl2CF2Y (Y = H, Cl, F, C1-3 alkyl, halo-substituted C1-3 alkyl; e.g., 1,1,2-trifluoro-1,2-dichloroethane) or CF2ClCFXY (X = H, Cl, F) into CF3 group-substituted alkanes CF3CClXY (e.g., 1,1,1-trifluoro-2,2-dichloroethane). The method is also suitable for the purification of certain (hydro)carbon compds. which are contaminated by isomerizable compds.
IT **306-83-2P**, 1,1,1-Trifluoro-2,2-dichloroethane
RL: IMF (Industrial manufacture); PREP (Preparation)
(isomerization process and catalysts for the manufacture of CF3 group-substituted alkanes)
RN 306-83-2 CAPLUS
CN Ethane, 2,2-dichloro-1,1,1-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IT **812-04-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(isomerization process and catalysts for the manufacture of CF3 group-substituted alkanes)
RN 812-04-4 CAPLUS
CN Ethane, 1,1-dichloro-1,2,2-trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$F-CCl_2-CHF_2$

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT